

46
MW

 $\text{Ar}_3\text{H}_2\text{O}$
Water – argon (1/3)
(weakly bound complex)

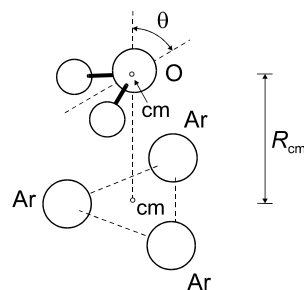
 C_{3v}
(effective symmetry class)
(large-amplitude motion)
 $\text{H}_2\text{O} \cdot 3\text{Ar}$

r_s	$\text{\AA}^a)$	θ_s deg ^{a)}
Ar...Ar	3.848(5)	$\theta^b)$ 74(2)
Ar...cm(H_2O)	3.675(5)	

The barrier for the pseudorotation in which the protons hop between the argons is determined to be about 6 cm^{-1} making the H_2O moiety very mobile and effectively making the complex a symmetric top.

^{a)} Uncertainties were not estimated in the original paper.

^{b)} Angle between the C_2 axis of the H_2O and the C_3 axis of the complex.



Arunan, E., Emilsson, T., Gutowsky, H.S., Dykstra, C.E.: J. Chem. Phys. **114** (2001) 1242.